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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,762	11/19/2003	Jung Pill Kim	2003P52878US	6173

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EXAMINER

LAM, DAVID

ART UNIT PAPER NUMBER

2827

DATE MAILED: 04/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

<b>Office Action Summary</b>	<b>Application No.</b> 10/716,762	<b>Applicant(s)</b> KIM, JUNG PILL	
	<b>Examiner</b> David Lam	<b>Art Unit</b> 2827	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Drawings*

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 700 on page 13, line 19. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 25 recites the limitation "the voltage generator" in line 6. There is insufficient antecedent basis for this limitation in the claim.

### *Double Patenting*

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-28 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-30 of copending Application No. 10/716,749. Although the conflicting claims are not identical, they are not patentably distinct from each other because the elements recited in claims 1-28 of the present application are art recognize equivalent with claims 1-30 of copending Application No. 10/716,749.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

With regard to claims 1-28, the copending application Kim et al. (10/716,749) recited an apparatus and method of a memory device comprising: means for supplying temperature information, one or more voltage generators for generating voltage to be applied to substrate of the switching transistor or word line of one or more memory cells, wherein the voltage generator is configured to vary the level of the output voltage based on the temperature information.

Kim et al. disclose the claimed invention as noted above but not explicitly disclose wherein the voltage is negative with respect to ground reference.

However, Kim et al. disclose at least one of the internally generated voltages is negative with respect to a ground reference (claim 10).

It would have been obvious to one having ordinary skill in the art at the time of the invention to form the voltage generator of Kim et al. for generating a negative internal voltage to

be applied to the one or more memory cell that base on the temperature information in order to provide a low power consumption, size reduction, highly efficiency voltage generating circuit for the semiconductor memory device.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 18- 19, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Buskirk et al. (6,205,074) in view of Kearney (5,608,347).

Regarding to claims 18-19, 25, Van Buskirk et al. discloses a memory device comprising: means for supplying temperature information (24) indicative of a temperature of the memory device; a voltage generator/regulator (14) to generate a bias voltage to be applied to substrate of a switching transistor/word line of one or more of the memory cells; wherein the voltage generator is configured to vary the level of the bias voltage based on the temperature information, to lower level of the bias voltage as the temperature of the memory device increases. *See Figs. 1-4; Cols. 5-12.*

As per above discussion, Van Buskirk et al. disclose the claimed invention but lack an inclusion of wherein the voltage is negative with respective to ground reference.

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Kearney disclose a temperature dependent voltage generator (214) for generating a negative voltage signal that is substantially proportional to the change of the operating temperature. *See Figs. 6; Cols. 13, lines 1-26.*

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Van Buskirk et al.'s voltage generator by utilizing Kearney's temperature dependent voltage generator to generate negative voltage that is substantially proportional to the change of the operating temperature to compensate for effort due to temperature variation within the memory device.

4. With regard to claims 1-4, 9-11, 14-15, they encompass the same scope of invention as to that of claims 18-19, 25 except they draft in method format instead of apparatus format. The claims are therefore rejected for the same reason as set forth above.

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Di Iorio (6,738,297) discloses a low voltage current reference memory device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Lam whose telephone number is 571-272-1782. The examiner can normally be reached on 6:00 – 4:30.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoai Ho can be reached on 571-272-1777. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**D. Lam**

March 31, 2005



**DAVID LAM**  
**PRIMARY EXAMINER**